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Applicant: Sosin, H. Examiner: Blau, S.
Serial No.: 09/248,515 Art Unit: 3711
Filing Date: February 8, 1999 Attorney Docket: 2002832-0002
Title: GOLF CLUB AND METHOD OF DESIGN

Assistant Commissioner of Patents
Washington, DC 20231

Sir:

DECLARATION UNDER 37 C.F.R. § 1.132

I, John Hampford, declare as follows:

1. I am President and CEO of Hoffman Forged Products ("Hoffman"), a manufacturer of golf club heads. Hoffman was established in 1952 and specializes in the tooling and manufacture of forged golf club heads. Since 1952, Hoffman has made over 100 million golf club heads (including about 50 million golf club heads for Wilson Sporting Goods and about 10 million golf club heads for Ben Hogan, two of the largest golf club manufacturers). Hoffman also tooled and manufactured the forgings which Tiger Woods, currently the highest ranked professional golfer in the world, has used since 1998.
2. I have reviewed and am familiar with the subject matter disclosed and claimed in United States Patent Application No. 09/248,515 (the '515 application). I have also reviewed and am also familiar with the teachings of United States Patent No. 5,421,098 (the '098 patent).
3. I understand that the Examiner who is evaluating the '515 application has said that the invention is not patentable because it is unclear how design loft is calculated, and how it is related to lean angle. One purpose of my Declaration is to establish that manufacturers of

golf clubs would understand the definitions of design loft and lean angle that are presented in the '515 application, and would appreciate that clubs made as described in the '515 application are structurally different from all other clubs manufactured today, particularly in that all currently-manufactured clubs are originally and intentionally manufactured with a zero lean angle.

4. All golf club heads are designed and manufactured to have a "design loft", which represents the angle that is intended to be made between the face of the golf club head and a line perpendicular to the ground at the time of impact, and a "bounce", which is a measure of the curvature of the sole and is given by the angle made between the ground and a line that runs from the deepest point of the sole (i.e., the point of contact with the ground) to the leading edge of the head when the head is oriented to achieve its design loft. Currently, all golf clubs are designed and manufactured so that the shaft will be perpendicular to the ground when the head is in its intended impact position, at which its design loft and bounce are achieved.
5. It is clear to me from reading the '515 application, that it describes a golf club fundamentally different from any club that has previously been designed or made. Specifically, the '515 application describes the design and manufacture of a golf club whose shaft will not be perpendicular to the ground at the time of impact. I understand the application to define the "lean angle" of a club as the angle made between the shaft and the perpendicular when the head is in its intended impact position. By this definition, all golf clubs made today are designed and constructed so that, at the time of manufacture, they have a zero lean angle. The clubs described in the '515 application have a non-zero lean angle at the time of manufacture.
6. Based on my extensive experience in the golf club manufacturing business, I can represent that a golf club manufacturer would understand the definition of lean angle given in the '515 application. Moreover, I can represent that a golf club manufacturer could readily

determine the intended design loft and bounce of a given golf club head, and therefore could assess the lean angle of any golf club in accordance with the definition of lean angle given in the '515 application. As I have noted, all golf clubs are currently made to have a zero lean angle at the time of manufacture. Golf clubs made according to the '515 application are therefore structurally different from all currently available golf clubs.

7. I understand that the Patent Examiner who is evaluating the '515 application has also said that the invention is not patentable because it is either the same as or obvious in light of the '098 patent. Another purpose of my Declaration is to establish that the '515 application describes an invention quite different from that of the '098 patent.
8. The '098 patent describes modifying a putter by bending the hosel that connects its head to its shaft. Under the definition of lean angle given in the '515 application, the introduction of such a bend would create a putter with a non-zero lean angle. However, the non-zero lean angle would not be present at the time of manufacture, and a bent club is structurally very different from a club that is made with a non-zero lean angle. The '098 patent does not describe a golf club that has a non-zero lean angle at the time of manufacture, and does not suggest that such a club could or should be made.
9. First, it is worth noting that the methods described in the '098 patent are really only applicable to putters. Although the '098 patent includes a mention that its approach could be applied to other clubs, golf club manufacturers would understand that it would not be realistic to do so. It is simply not reasonable to propose that the hosel of a wood could be shaped or formed by applying pressure. The hosels of woods were historically made of wood and are currently made from brittle non-malleable materials such as titanium; such hosels would break if bent to any significant degree. Furthermore, bending a golf club as described in the '098 patent distorts the club so that the benefits of the original golf club head structure are lost. For example, the center of mass, and therefore the sweet spot, of the head will necessarily have shifted from its originally designed position, thereby

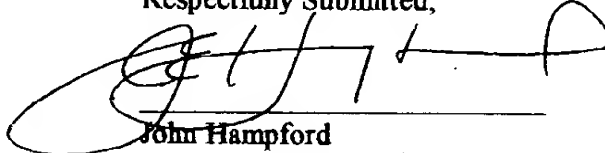
affecting the feel and performance of the club. The '098 patent focuses on putters, which may be more tolerant of changes to the sweet spot because they are only used for gentle strokes. However, introducing a bend into the longer distance iron or wood clubs could have a major negative effect on their performance.

10. Even if the approach described in the '098 patent were applied to golf clubs other than putters, the results would be very different from those achieved by the '515 application, and would not render the '515 application's invention obvious. Bending the hosel introduces an unattractive kink into the club and, furthermore, weakens its mechanical properties such as tensile strength. Moreover, even clubs with relatively malleable hosels (e.g., irons which are usually made of steel) cannot be bent beyond a certain point, typically a few degrees, without breaking. Thus, the golf club bending described in the '098 patent is different from the invention of the '515 application. Manufacturers reading the '098 patent would not be motivated to try and make a club as described in the '515 application, or indeed to make anything other than a bent putter.
11. The '515 application describes a completely new approach to the design and manufacture of golf clubs. By introducing the concept of clubs designed to have non-zero lean angles *before* they are manufactured, the '515 application provides methods of making a new type of golf club. In particular, by incorporating the choice of lean angle at the design stage, the methods taught in the '515 application provide the tools necessary for manufacturing wood and iron clubs with any lean angle without interfering with the pre-selected golf club head characteristics. The '515 application further provides the first description of golf clubs and methods of making golf clubs with non-zero lean angles that are greater than 3 degrees; with non-zero lean angles and a center of mass that is optimally located; and/or with non-zero lean angles where the hosel connecting the shaft and golf club head is substantially parallel to the shaft (i.e., there is no "kink"). For all of these reasons, the invention described in the '515 application is different from, and nonobvious

in light of, all current golf clubs and their methods of manufacture.

12. I, John Hampford, declare that all statements made herein of my own knowledge are true and that these statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful, false statements and the like are made punishable by fine or imprisonment, or both, under §1001 of Title 18 of the United States Code and that such willful, false statements may jeopardize the validity of the application or any patents that may issue thereon.

Respectfully Submitted,

A handwritten signature in black ink, appearing to be "John Hampford", written over a horizontal line.

John Hampford

Date:

11/1/2001